Virginia Department of Environmental Quality

Air Division

Office of Air Permit Programs

Annual Report for Fiscal Year 2004
(July 1, 2003 through June 30, 2004)

February 2005

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I. Introduction: Permit Program Description and Overview

A. Overview of Air Permitting in Virginia

The federal Clean Air Act (CAA) and the Virginia Air Pollution Control Law authorize the establishment and administration of air emissions permitting programs as tools to achieve, maintain, and prevent deterioration of air quality that meets National Ambient Air Quality Standards (NAAQS) for criteria pollutants.[1] These laws also authorize permitting to regulate the emissions of hazardous air pollutants (HAPs).

Under the auspices of the State Air Pollution Control Board, the Virginia Department of Environmental Quality (DEQ) issues several different types of air emissions permits that regulate the construction and operation of certain stationary sources of air pollution.[2] These permits include:

- ***Minor New or Modified Source Construction Permits (Minor NSR Permits)***, which are required prior to the construction, modification, relocation, or reconstruction of non-exempted minor stationary air pollution sources as well as certain major sources not subject to nonattainment area or Prevention of Significant Deterioration (PSD) permit requirements.[3]

- ***General Permits***, which are a form of Minor NSR permit used to regulate in a streamlined fashion standardized operations that do not require case-by-case analysis. DEQ began general permitting during state fiscal year[4] (FY) 2003 for certain non-metallic mineral mining operations. That remains the only category of general air permit administered by DEQ.

- ***Major New or Modified Source Construction Permits in Nonattainment Areas (NA Permits)***, which are required prior to the construction, modification, relocation, or reconstruction of major air pollution sources in areas that do not attain the NAAQS.

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[1] NAAQS provide health-based standards for six criteria pollutants--carbon monoxide, lead, nitrogen oxides, ozone, particulate matter, and sulfur oxides. As a precursor to formation of ozone, volatile organic compounds (VOCs) are also regulated in order to achieve NAAQS.

[2] DEQ provides an online permitting guide at http://www.deq.virginia.gov/permits/homepage.html that describes applicability, requirements, procedures, and authority for DEQ air, water, and waste permits as well as environmental permitting programs of the Virginia Marine Resources Commission and Department of Agriculture and Consumer Services. More detailed information on DEQ air permitting requirements and procedures (including public comment and hearing provisions) can be obtained at http://www.deq.virginia.gov/air/permitting/homepage.html or by contacting DEQ regional office air permitting staff.

[3] In addition to authorizing construction, modification, reconstruction, or relocation of pertinent air pollution sources, these permits also authorize operation. Minor NSR, NA, and PSD permits are all forms of NSR permitting.

[4] The state fiscal year runs from July 1 through June 30.

- ***Prevention of Significant Deterioration Permits (PSD Permits)***, which are required prior to construction, modification, relocation, or reconstruction of major air pollutant sources located in areas that do attain the NAAQS.

- ***Title V Federal Operating Permits***, which are required to operate major stationary sources of air pollution.[5]

- ***Title IV Acid Rain Permits***, which are applicable to fossil fueled, electricity grid-connected electrical generating units (EGUs) that are subject to provisions of Title IV of the CAA.

- ***State Operating Permits (SOPs)***, which are used to create federally enforceable permit conditions on stationary source facilities that elect to operate below major source thresholds but would otherwise be subject to federal Title V provisions. SOPs can also be used for consolidating multiple minor source air permits at a facility, for emissions trading and banking, and for imposing source-specific emission standards under certain circumstances.

B. Permitting Activity

There are several types of permit processing actions. These include:

- Issuance of a new permit,
- Significant amendment of an existing permit,
- Minor amendment of an existing permit,
- Administrative amendment of an existing permit, and
- Denial of a new permit or permit amendment.

DEQ also writes exemption letters for sources wishing official confirmation that an air permit is not required for a particular operation or emissions unit. Another type of action is withdrawal of a permit application or amendment request.

Table 1 summarizes DEQ air permitting actions for the past three years. Figure 1 depicts in graphical form permits and permit amendments issued during those same years. Table 2 shows permits and permit amendments issued by each DEQ regional office; exemption letters, denials, and withdrawals are not included in the tally.

[5] There are distinctions between Title V and NSR permitting program definitions of major sources (see Section II below) as well as between federal and state definitions (see Section III below).

Table 1. Summary of DEQ Air Permitting Actions

FY	Permits Issued	Significant Amendments	Minor Amendments	Administrative Amendments	Exemptions	Denials	Withdrawals	Total Actions
2002	538	27	91	99	265	2	82	1104
2003	484	77	126	86	297	1	93	1164
2004	411	87	161	86	289	6	65	1105

Figure 1. Permits and Permit Amendments Issued

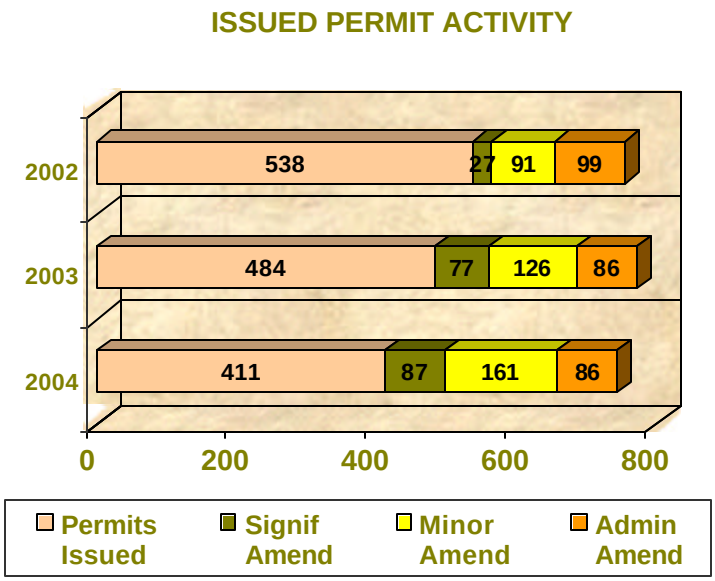


Table 2. Permits and Permit Amendments Issued by Regional Office*

REGION / FY	NVRO	PRO	SCRO	SWRO	TRO	VRO	WCRO	Total Permits & Amendments Issued
2002	71	189	78	136	116	75	90	755
2003	65	178	85	144	122	96	83	773
2004	98	183	70	147	97	90	60	745

* NVRO--Northern Virginia Regional Office, includes Fredericksburg Satellite Office
PRO--Piedmont Regional Office
SCRO--South Central Regional Office
SWRO--South West Regional Office
TRO--Tidewater Regional Office
VRO--Valley Regional Office
WCRO--West Central Regional Office

C. Staffing

Table 3 summarizes air permitting staff during 2004. DEQ regional office staff process air permit applications, issue permits and permit amendments, and respond to permit-related inquiries. The Office of Air Permit Programs at the DEQ central office in Richmond supports regional office staff by:

- Providing guidance documents and interpreting laws, regulations, and policies;
- Offering technical assistance, such as performing air modeling and supporting Best Available Control Technology analyses;
- Interfacing with regulation writers and the Environmental Protection Agency (EPA); and
- Maintaining program statistics and reports.

Table 3. Air Permitting Staff Positions and Employees, 2004

	Supervisory Staff	Permit Writers	Technical Support Staff	Other Support Staff*	Total Air Permitting Staff
Regional Offices	7	57		8	72
Central Office	1		9		10
Total	8	57	9	8	82

*Includes both full-time salaried and part-time wage staff.

II. Clean Air Act Title V Federal Operating Permit Program

A. Program Description

A Title V Federal Operating Permit is required for all major stationary sources of regulated air pollutants.[6] Among major sources are those emitting or with the potential to emit at least 10 tons per year of any one HAP or 25 tons per year of a combination of HAPs as well as sources that emit or have the potential to emit at least 100 tons per year of any criteria pollutant. In Northern Virginia, which is a classified as a severe nonattainment area for the 1-hour ozone standard, the threshold for NOx and VOCs is 25 tons per year.[7]

[6] Major sources are defined at 9 VAC 5-80-60 C. There are some differences between the definitions of major sources under the Title V Federal Operating Permit program and the NSR permit programs. Also, there are several complexities in the definitions, including whether fugitive and insignificant source potential-to-emit should be included in determining whether a facility meets the major source threshold.

[7] In April 2004 the EPA classified Northern Virginia and the Fredericksburg area as moderate nonattainment areas for ozone under the new 8-hour standard. Currently both the 1-hour and 8-hour standards apply in Northern Virginia. If EPA were to rescind the 1-hour standard, the Northern Virginia major source threshold could rise to 50 tons per year. The Fredericksburg area and several areas classified as marginal nonattainment remain at the 100 ton per year major source threshold. (See additional discussion in the Issues in Air Permitting section of this report.)

Title V permitting is a relatively new program that was still completing initial permitting for existing Virginia major sources during 2004. Federal deadlines called for 287 of these sources to have issued Title V permits by December 1, 2003 even as new major sources entered the Title V process.[8] DEQ processed 93 percent of these initial batch applications by the deadline (of which 241 had been processed in FY 2003 or prior years), which was deemed satisfactory progress by EPA. There were 18 initial batch permit applications still pending as of July 1, 2004; some of these involved complicating compliance and confidentiality issues.

B. Permitting Activity

By the end of FY 2004, DEQ had issued 307 Title V permits. Table 4 summarizes the status of Title V permit activity for initial and non-initial batch applications. It also distinguishes between new applications and renewals. Table 5 shows Title V permitting actions during the past three years while Figure 2 shows how those actions were distributed by DEQ region.

Table 4. Title V Permitting Status

	Issued Before FY '04	Issued FY '04	Total Issued	Pending Applications on July 1, 2004
Initial Batch	241	28	269	18
Non-Initial Batch (including renewals)	7	22 renewals 6 new applications	38	22 renewals 27 new applications
Total	248	59	307	67

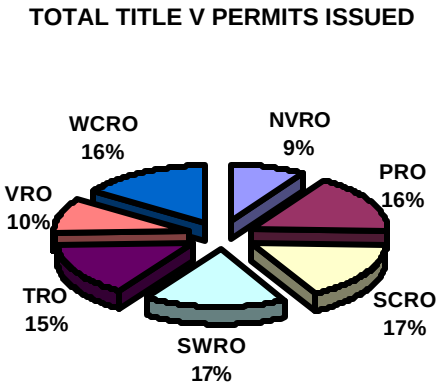
Table 5. Title V Permitting Actions

FY	Permits Issued	Significant Modifications	Minor Modifications	Administrative Amendments	Reopened Permits*	Total Permits and Amendments Issued
2002	76	1	4	11	0	92
2003	65	13	9	12	1	100
2004	38	18	27	14	50	147
Total	179	32	40	37	51	339

*Reopened permits are changes initiated by DEQ, most frequently done to incorporate new or changed regulatory requirements into existing Title V permits.

[8] Actually there were approximately 340 initial batch applicants; however a number of applications were withdrawn while other sources accepted enforceable limitations on operations to qualify themselves as synthetic minor sources under the State Operating Permit program.

Figure 2. Title V Permits and Permit Amendments Issued by Regional Office (Percent of total number of actions during 2002-04)



III. Minor New Source Review (NSR) Permits

A. Program Description

The Minor NSR Permitting Program is the largest air permitting program in Virginia in terms of numbers of existing permits, permit applications, permit actions, and regulated entities. Minor NSR Permits are required for the construction, modification, relocation, or reconstruction of minor stationary air pollution sources not otherwise exempted by regulations. Also, certain sources (called state majors) that meet state but not federal definitions for major sources are regulated under Minor NSR provisions.[9]

While the Minor NSR permit is considered a pre-construction permit (also covering modification, relocation, and reconstruction), it also authorizes operation of the permitted source. The permit does not expire and so remains valid until superceded by a new NSR permit (if the source is modified, relocated, or reconstructed) or until the emissions units are permanently shut down and the permit is revoked.

Regulations governing the NSR program were amended September 1, 2002, with 9 VAC 5-80-1100 *et seq*. replacing 9 VAC 5-80-10 and 11. DEQ has proposed other changes to the minor NSR regulations as described in the Issues in Permitting section of this document.

[9] State majors are sources that meet the state 100 ton per year threshold for major sources of criteria air pollutants but do not qualify as major sources under the PSD and nonattainment major source programs. For most source categories the federal PSD applicability threshold is 250 tons per year but 28 categories have a 100 ton per year threshold.

B. Permitting Activities

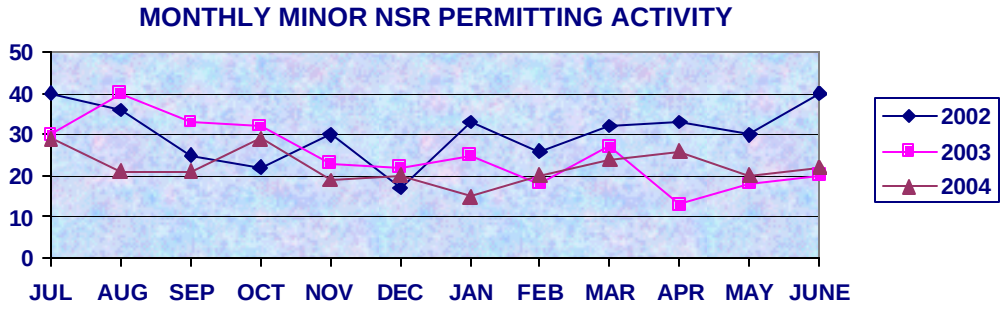
Table 6 summarizes Minor NSR permits issued during FYs 2002 through 2004 (permit amendments are not included). The data include average and maximum processing times. The table also indicates the number of permits issued within or exceeding processing time objectives.[10] Figures 3 and 4 indicate Minor NSR permit issuances on a monthly basis and by region, respectively. Since Minor NSR is the largest category of permitting by number of permits and regulated entities, these figures give some indication of regional distribution of work and regulated entities as well as the pace of work. This table and the two figures do not include state major NSR permits, of which three were issued in FY 2002, four in FY 2003, and five in FY 2004.

Table 6. Minor NSR Permitting Activity and Application Processing Time

FY	Permits Issued	* Avg. Processing Time in Days w/Hearing	** Avg. Processing Time in Days w/o Hearing	Max. Processing Time in Days w/Hearing	Max. Processing Time in Days w/o Hearing	Permits Processed in Expected Time	Permits Not Processed in Expected Time
2002	364	69	36	79	57	352	12
2003	301	90	40	124	68	288	13
2004	313	NA***	63	NA***	398	299	14

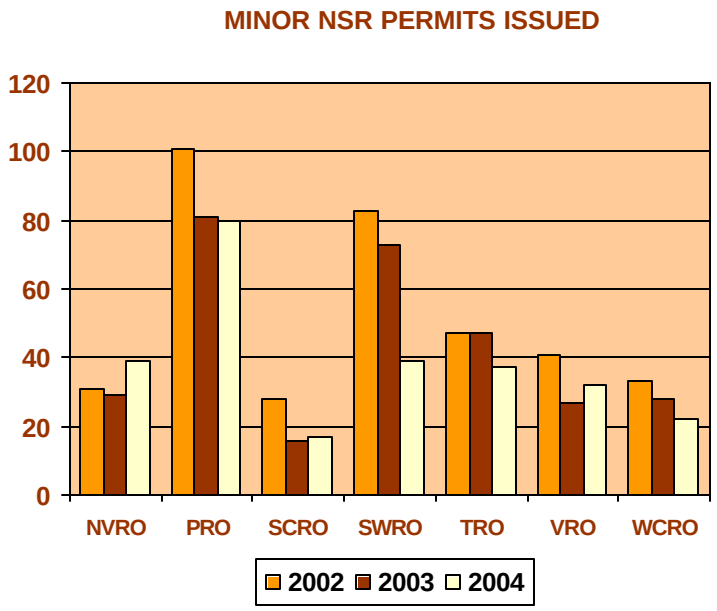
* Expectation is 180 days or less for permits requiring public hearing.
** Expectation is 90 days or less for permits not requiring public hearing.
*** No minor NSR permit applications were issued in FY 2004 that required hearings.

Figure 3. Monthly Number of Minor NSR Permits Issued (Not Including Amendments)



[10] Processing time is the number of calendar days between completed application and permit issuance. For Minor NSR Permit applications that do not require a public hearing the expected processing time is 90 days or less. For applications that require public hearing the expected processing time is 180 days or less.

Figure 4. Aggregate Number of Minor NSR Permits Issued by Regional Office (Not Including Amendments)



C. General Permits

As was discussed in the introductory section of this report, DEQ has begun developing general permits for air emissions from selected activities. The general permit provides a streamlined means for permitting standardized minor source operations that do not require case-by-case analyses and permit conditions. The general permit falls under the Minor NSR category.

The Nonmetallic Mineral Processing General Permit came into effect on December 2, 2002 and is, so far, the only air emissions general permit available from DEQ. DEQ issued eight Nonmetallic Mineral Processing General Permits in FY 2003 and 23 in FY 2004.

IV. Nonattainment Area Major Source Permitting and Prevention of Significant Deterioration (PSD)

A. Nonattainment Permit Program

While sources subject to Minor NSR Permits generally have to meet Best Available Control Technology (BACT) levels of air pollution abatement for criteria pollutants, new and modified major sources operating in areas that do not meet the NAAQS are generally subject to more stringent Lowest Achievable Emissions Rate (LAER) standards. Furthermore, such sources are required to obtain offsetting emission reductions from other sources.

Major New or Modified Source Construction Permits for Nonattainment Areas are required of new, modified, relocated, and reconstructed major stationary air pollution sources in nonattainment areas.[11] These permits also authorize operation of the source. As noted previously, the major source threshold was 50 tons per year for NOx and VOCs in Northern Virginia in prior years. Reclassification of Northern Virginia as a severe nonattainment area for 1-hour ozone standard in March 2003 lowered the major source threshold to 25 tons per year.[12]

B. PSD Permit Program

The PSD program was designed into the Clean Air Act in order to prevent areas that have cleaner air than required by the NAAQS from being degraded. PSD permits apply to major stationary air pollution sources that emit at least 250 tons per year of any one or combination of regulated air pollutants, except that 28 specific industries and processes are subject to a 100 ton per year threshold.[13]

From 1998 through 2003 there was a surge of interest in building new electric generating units (EGUs) in Virginia.[14] By 2001, DEQ had received 26 air permit applications for EGUs. Subsequently a number of applicants withdrew their permit applications. As of the end of FY 2004, 14 EGU projects had been constructed or were still considered to be

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[11] These permits are sometimes called "PSD nonattainment" because an area that is in nonattainment for one criteria pollutant is generally in attainment for most other criteria pollutants. For example, a major source of both NOx and carbon monoxide (CO) may be subject to nonattainment permitting for NOx and PSD permitting for CO in an area such as Northern Virginia. This is because the area is in nonattainment for ozone (of which NOx is a precursor) but is in attainment of for CO. Also, NA and PSD permits may cover particular pollutants that are only subject to Minor NSR requirements at a particular source.

[12] EPA adopted a new 8-hour ozone NAAQS and issued in April 2004 non-attainment classifications and reclassifications for several Virginia areas. Currently the 8-hour and 1-hour standards are both in effect and the 25 tons per year major source threshold remains in effect for the Northern Virginia nonattainment area. This is discussed further in the Issues in Air Permitting section of this document.

[13] A list of the 28 industries is available at http://www.deq.virginia.gov/air/permitting/xairperm.html under the PSD program description.

[14] See http://www.deq.virginia.gov/air/cogens/sources.html for more information about EGUs proposed to be built in Virginia.

active. Of these, nine are subject to PSD permitting while the remaining five accepted permit limitations to keep their emissions below the threshold for PSD applicability. These latter facilities are termed synthetic minors and are subject to the Minor NSR Permit.

Table 7 indicates the status as of the end of FY 2004 of the permit applications for the 14 EGU projects cited above. Table 8 Summarizes PSD and Nonattainment permits issued during the past three years.

Table 7. Permit Status of 14 Virginia EGU Projects

	Application Review	Permit Issued, No Construction	Permit Issued, Under Construction	In Operation
Synthetic Minor NSR Permit	0	0	0	5
PSD Permit	0	5	0	4

Table 8. Summary of PSD and Nonattainment Area Major Source Permitting Activity

FY	PSD	Nonattainment	Number of Permits Issued
2002	3	0	3
2003	6	1	7
2004	4	0	4

V. Other Air Permitting Programs

A. State Operating Permit Program

The State Operating Permit (SOP) is an elective permit issued at the request of the applicant or at the discretion of DEQ. The SOP is typically used for sources that have the potential to emit air pollution at levels that would qualify them as major sources but agree to operate their facilities in a way that keep them as minor sources. Such sources are called synthetic minors. The SOP establishes enforceable permit conditions for such sources while allowing the sources to avoid more complex procedures and conditions associated with major source and Title V permitting.

The SOP can also be employed to consolidate multiple air permits at certain facilities into one operating permit. Under some circumstances it can be issued to facilitate emission trading and banking. Also, at DEQ discretion, the SOP may be issued to cap specific sources or emissions units to remedy a violation, or to establish source-specific emission standards or other requirements.

Table 9 indicates SOP activity by DEQ regional office while Table 10 and Figure 5 summarize types of SOP actions.

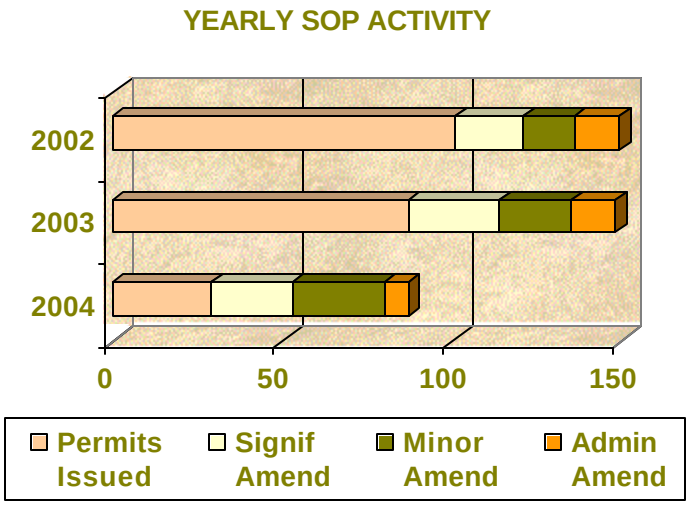
Table 9. State Operating Permitting Activity by DEQ Regional Office

Region / FY	NVRO	PRO	SCRO	SWRO	TRO	VRO	WCRO	Total Permits Issued, Including Amendments
2002	12	27	15	12	49	14	20	149
2003	5	34	26	13	34	18	18	148
2004	16	24	8	6	21	7	5	87
Total	33	85	49	31	104	39	43	384

Table 10. State Operating Permitting Activity by Type

FY	Permits Issued	Significant Amendments	Minor Amendments	Administrative Amendments	Total Permits Issued, including Amendments
2002	101	20	15	13	149
2003	87	27	21	13	148
2004	29	24	27	7	87

Figure 5. Yearly State Operating Permit Activity



The growth in SOPs issued since 2001 can be correlated with increased implementation of the Title V operating permit program. Recall that a SOP can be a means for a source with a potential-to-emit at major source levels to accept enforceable operational limitations that keep the source operating at minor source levels of emissions (that is, synthetic minor). This would then allow the source to avoid the need to obtain a Title V permit.

B. Title IV Acid Rain Operating Permit Program

In accordance with Title IV of the Clean Air Act, the owners of certain EGUs are subject to specific SO_2 and NO_x emission limits as well as monitoring, record keeping, and reporting requirements. Such facilities must have an Acid Rain Operating Permit. These facilities are eligible to participate in national SO_2 emissions trading as well as in the Virginia NO_x trading program.

DEQ has the objective of incorporating Acid Rain Operating Permit provisions into the Title V Federal Operating Permit to create a single federally enforceable operating permit for pertinent air pollution sources by January 2008.

DEQ issued five new Title IV Acid Rain Operating Permits in FY 2002, nine in FY 2003, and two in FY 2004.

VI. Issues in Air Permitting

A. Proposed Changes to Virginia's Minor NSR Regulations (Article 6)

In 2002, major revisions to the minor NSR program were adopted that included a change in the way permit applicability was determined. Those revisions changed the applicability approach from examining physical or operational changes at individual emissions units to looking source-wide for net emissions changes at a facility.

While this new approach has worked well in the major NSR programs, such as the PSD program, it is problematic for the minor NSR program due to the lack of an underlying permitting program that would make the netting approach enforceable. This introduced difficulties for DEQ permitting staff in determining permit and BACT applicability, thus compromising timeliness, efficiency, and consistency of permit processing.

The Air Pollution Control Board approved DEQ moving forward with changes to Article 6 at the September 2004 Board Meeting. The changes are currently under Executive Review with anticipated finalization in Summer 2005. The changes will return Article 6 to its previous applicability approach.[15]

[15] DEQ makes and amends regulations in accordance with the Virginia Administrative Process Act. Please see the Virginia Regulatory Town Hall at http://townhall.state.va.us and the DEQ Public Notices page at http://www.deq.virginia.gov/info/publicnotices.html for public participation and comment opportunities. The Virginia Regulatory Town Hall has an e-mail alert feature for those interested in tracking regulatory changes.

B. Title V Deadlines

As discussed previously, a federal deadline of December 1, 2003 was imposed on DEQ to complete processing of 287 Title V permit applications.[16] These applications constitute the initial batch of submissions from calendar year 1998. As of the end of FY 2004, 269 of these applications had been processed and permits issued while 18 were still pending.

The EPA found DEQ's progress with initial batch Title V permitting to be satisfactory. DEQ is working hard to complete work on remaining initial batch applications while processing new and renewal Title V permit applications. Some of the remaining initial batch permits had been delayed due to applicant-specific complications such as compliance issues that have not been fully resolved or complex issues related to protection of confidential business information.

C. Classification and Reclassification of Nonattainment Areas[17]

In 2003 a five-county and five-city area of Northern Virginia closest to Washington, DC was reclassified from serious to severe nonattainment for ozone under the 1-hour standard and was made subject to a major source threshold of 25 tons per year for NOx and VOCs. However, in April 2004 EPA issued designations under the new 8-hour ozone standard that classified a four-county, five-city area of Northern Virginia as moderate nonattainment along with the two-county, one-city Fredericksburg area.

Currently both the 1-hour and 8-hour ozone NAAQS are in force, so the 25 ton per year major source threshold remains in place for the pertinent Northern Virginia localities. If EPA rescinds the 1-hour standard, that area could have the major source threshold raised to 50 tons per year.

The Fredericksburg area as well as areas classified as marginal nonattainment for NOx and VOCs (Richmond and Hampton Roads areas) retain a 100 ton per year major source threshold for criteria pollutants.

These new nonattainment classifications also affect emissions offsets required of new and modified major sources locating in nonattainment areas. Under the 8-hour ozone NAAQS a 1.1-to-1 emissions reduction offset is required in marginal nonattainment areas while a 1.15-to-1 ratio is needed in moderate nonattainment areas.

The Shenandoah National Park is also classified as nonattainment for ozone while the Roanoke and Winchester areas have developed early action compacts to implement local emissions reductions that may forestall nonattainment designation.

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[16] Actually there were approximately 340 initial batch applicants, however a number of applications were withdrawn while other sources accepted enforceable limitations on operations to qualify themselves as synthetic minor sources under the State Operating Permit program.

[17] See http://www.deq.state.va.us/air/status.html for a map of ozone nonattainment designations.

In December 2004 EPA classified a four-county, five-city area in Northern Virginia as nonattainment for fine particulate matter (PM 2.5). EPA has not yet provided guidance that allows assessment of permitting implications of this.[18]

D. Reasonably Available Control Technology (RACT)

The 2003 reclassification of Northern Virginia from serious to severe nonattainment status under the 1-hour ozone NAAQS lowered the potential-to-emit threshold for application of RACT standards to 25 tons per year for NOx. The RACT threshold remained at its previous 25 tons per year for VOCs.

DEQ identified 46 candidate NOx RACT sources that were potentially affected by the changed threshold. Of these, 38 sources avoided RACT by electing to take emission limits of less than 25 tons per year.[19] Two candidate sources shut down. The DEQ Northern Virginia Regional Office worked with the six remaining sources to develop RACT requirements, which have been incorporated into the facilities' permits and into the federally-required state implementation plan (SIP). DEQ submitted SIP revisions to EPA on February 25, 2004.

In addition, DEQ's West Central and Valley Regional Offices have initiated work on three and one, respectively, NOx RACT determinations for FY 2005.

E. NOx SIP Call and NOx Emission Trading

In 1998 the EPA determined that air pollution sources in 22 states and the District of Columbia were making significant contributions to nonattainment of the ozone NAAQS in downwind states. EPA required the upwind states, including Virginia, to revise their SIPs to reduce NOx emissions contributing to NAAQS nonattainment in the downwind states.[20]

The EPA rule, called the NO_X SIP Call Rule (40 CFR 51.121), established statewide NO_X emission budgets that states must achieve by the 2007 ozone season. The NOx emission budgets pertain to fossil fuel burning EGUs with over 25 megawatt (electric output) nameplate capacity and fossil fuel burning non-EGUs rated at over 250 million British thermal units (Btu) per hour heat input capacity.

Part of Virginia's response to the NOx SIP Call was to develop a NOx emission trading regime applicable to EGUs and large non-EGU boilers.[21] After appropriate rulemaking and public notice, Virginia's NOx trading regulations came into effect on July 16, 2002 as

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[18] See http://www.epa.gov/pmdesignations/finaltable.htm

[19] As synthetic minor sources, they have been permitted under state operating permit or minor NSR provisions.

[20] See http://www.deq.virginia.gov/air/planning/noxsip.html for more detailed discussion of the DEQ response to the NOx SIP Call.

[21] Details of NOx emission allowance allocations, cap levels and allowance availability, trading mechanisms, and other particulars are beyond the scope of this document.

9 VAC 5 Chapter 140. DEQ met the May 31, 2004 deadline for initiating the NOx Budget Trading Program.

Virginia's regulations require applicable sources to apply for a NOx Trading Budget permit. This permit is not a separate document but is instead incorporated into the relevant federal (Title V) or state operating permit. As of May 2004, 42 facilities with 148 emissions units had NOx Trading Budget permits.

F. Dominion Virginia Power Consent Decree

On October 10, 2003, the United States District Court for the Eastern District of Virginia entered a consent decree requiring Dominion Virginia Power (operating as Virginia Electric and Power Company) to, among other things, implement pollution control projects affecting 20 EGUs at seven Virginia and one West Virginia locations. These pollution control projects will bring about significant reductions in SO2, NOx, and particulate matter emissions.

The consent decree is a result of a lawsuit by the EPA and the States of Connecticut, New Jersey, and New York that alleged violations of PSD regulations in Virginia and West Virginia.

Implementation of the consent decree conditions will require DEQ to incorporate new emissions limitations in the permits of the affected EGUs. A regulatory challenge that arises from the consent decree is a provision allowing intra-company trading or offsetting of emissions allowances among the affected EGUs. This trading provision is separate from the national SO_2 emissions trading program and the Virginia NO_x trading regime. Another complication is that intra-company trading or offsets can cross state borders (one of the affected Dominion Virginia Power facilities is in West Virginia).

G. Hazardous Air Pollutant Issues

1. MACT

As authorized by the 1990 Clean Air Act Amendments, EPA developed technology- and performance-based maximum achievable control technology (MACT) standards that apply to a variety of industrial activities. These standards are incorporated into the Title V Operating Permit.

During state FY 2004 the EPA promulgated 15 MACT standards affecting an estimated 137 Virginia sources (see table 11). Seventy MACT standards were already in effect previously.[22]

[22] The number of MACTs reported here are based source categories, not Subparts in the federal regulations.

Table 11. MACT Standards Promulgated During FY 2004

Iron and Steel Foundries	Surface Coating of Automobiles and Light-Duty Trucks
Lime Manufacturing Plants	Surface Coating of Metal Cans
Mercury Cell Chlor-Alkali Plants	Surface Coating of Miscellaneous Metal Parts and Products
Miscellaneous Coating Manufacturing	Surface Coating of Plastic Parts and Products
Miscellaneous Organic Chemical Manufacturing	Stationary Combustion Turbines
Organic Liquids Distribution (Non-Gasoline)	Stationary Reciprocating Internal Combustion Engines
Primary Magnesium Refining	Taconite Iron Ore Processing
Site Remediation	

2. Residual Risk

Although MACT represents strict levels of emission controls, Congress recognized that even with full implementation of the MACT program risks from toxic air pollutants would not diminish to zero.

To that end Congress created a residual risk program intended to:

- assess any risks remaining after MACT standard compliance;
- determine if additional emission reductions are necessary and, if so, for which MACT categories;
- set a standard that protects the public with an "ample margin of safety"; and,
- set a more stringent standard, if necessary, taking into account cost, safety, and other relevant factors, to prevent adverse environmental effects.

EPA intends to follow a two-tiered approach for human health and ecological risk assessment. The first tier is a screening analysis using existing data along with conservative assumptions.[23] If the screening analysis does not conclusively exclude a source, a second tier analysis will be undertaken. The second tier will evaluate the potential exposure with a more detailed analysis including an uncertainty review to evaluate whether an ample margin of safety will be met.

In most cases EPA is supposed to set any residual risk standard no later than eight years following promulgation of the corresponding MACT standard.

During 2004 EPA issued one residual risk standard for coke ovens.

EPA published two guidance manuals (Volume 1--Overview of Air Toxics Risk Assessment and Volume 2--Site-Specific Risk Assessment Guidance) and intends a third document (Volume 3--Community-Scale Risk Assessment) at a later date.[24]

[23] With respect to human health, if the excess cancer risk is no more than one in a million and the non-cancer hazard index is 0.2 or less no additional regulation will be considered.

[24] Volumes 1 and 2 are available from EPA's web site. They are numbered, respectively, EPA-453-K-04001A and EPA-453-K-04001B.

H. Imaging and Digitization of Air Permitting Files

In order to improve efficiency of operations, enhance responsiveness to public information inquiries, and to assure continuity of operations in the event of catastrophe, DEQ has embarked on a program to digitize paper files for electronic storage, processing, and dissemination.

The air permitting program was the first DEQ program to begin this process. All of DEQ's regional offices have made substantial progress in imaging paper records. Most regions have completed imaging of open air permitting related files and are now imaging closed files as well as new documents as they are processed.